

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (original): A method of slowing aging in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow aging.

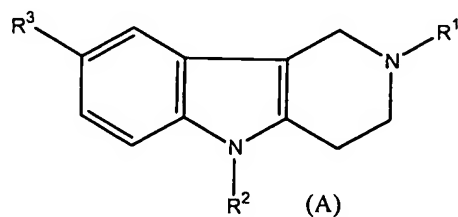
Claims 2-18 (cancelled)

Claim 19 (original): A method of slowing the progression of age associated hair loss in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow the progression of age associated hair loss.

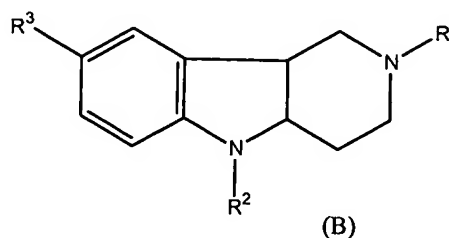
Claim 20 (original): The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.

Claim 21 (original): The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.

Claim 22 (currently amended): The method of claim 19 [[17]], wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



OR



wherein:

R<sup>1</sup> is selected from a lower alkyl or aralkyl

R<sup>2</sup> is selected from a hydrogen, aralkyl or substituted heteroaralkyl

R<sup>3</sup> is selected from hydrogen, lower alkyl or halo.

Claim 23 (original): The method of claim 22, wherein aralkyl is PhCH<sub>2</sub>- and substituted heteroaralkyl is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.

Claim 24 (original): The method of claim 22, wherein

R<sub>1</sub> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

Claim 25 (original): The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 26 (original): The method of claim 25, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 27 (original): The method of claim 19 or 26, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

Claim 28 (original): The method of claim 19, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

Claim 29 (original): The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

Claim 30 (original): The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .

Claim 31 (original): The method of claim 24 wherein  $R^1$   $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .

Claim 32 (original): The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .

Claim 33 (original): The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.

Claim 34 (original): The method of claim 24, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .

Claim 35 (original): The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .

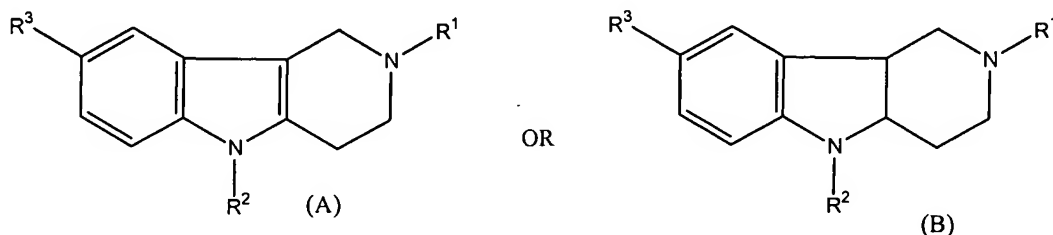
Claim 36 (original): The method of claim 24, where  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is H-, and  $R^3$  is Br-.

Claim 37 (original): A method of slowing the progression of age associated weight loss in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow the progression of age associated weight loss.

Claim 38 (original): The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.

Claim 39 (original): The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.

Claim 40 (original): The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

Claim 41(original): The method of claim 40, wherein aralkyl is  $\text{PhCH}_2$ - and substituted heteroaralkyl is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -.

Claim 42 (original): The method of claim 40, wherein

R<sup>1</sup> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

Claim 43 (original): The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 44 (original): The method of claim 43, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 45 (original): The method of claim 37 or 44, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

Claim 46 (original): The method of claim 45, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

Claim 47 (original): The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

Claim 48 (original): The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .

Claim 49 (original): The method of claim 42 wherein  $R^1$   $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .

Claim 50 (original): The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .

Claim 51 (original): The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.

Claim 52 (original): The method of claim 42, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .

Claim 53 (original): The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .

Claim 54 (original): The method of claim 42, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.

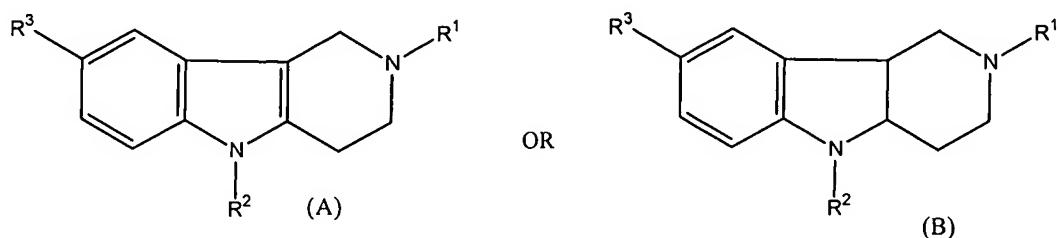
Claim 55 (original): A method of slowing the onset of an age associated vision disturbance in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow the onset of an age associated vision disturbance.

Claim 56 (original): The method of claim 55, wherein the age associated vision disturbance is age associated cataracts.

Claim 57 (original): The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.

Claim 58 (original): The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.

Claim 59 (original): The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

R<sup>1</sup> is selected from a lower alkyl or aralkyl

R<sup>2</sup> is selected from a hydrogen, aralkyl or substituted heteroaralkyl

R<sup>3</sup> is selected from hydrogen, lower alkyl or halo.

Claim 60 (original): The method of claim 59, wherein aralkyl is PhCH<sub>2</sub>- and substituted heteroaralkyl is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.

Claim 61 (original): The method of claim 59, wherein

R<sup>1</sup> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

Claim 62 (original): The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

*cis*(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 63 (original): The method of claim 62, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 64 (original): The method of claim 56 or 63, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

Claim 65 (original): The method of claim 64, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.



Claim 66 (original): The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

Claim 67 (original): The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .

Claim 68 (original): The method of claim 61, wherein  $R^1$   $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .

Claim 69 (original): The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .

Claim 70 (original): The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.

Claim 71 (original): The method of claim 61, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .

Claim 72 (original): The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .

Claim 73 (original): The method of claim 61, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.

Claim 74 (currently amended): The method of claim 1, [[8, 11,]] 19, 26, 29, 37, 44, 47, 55, 56, 63 or 66 wherein the mammal is a human.

Claim 75 (original): The method of claim 74, wherein the human is elderly.

Claim 76 (currently amended): The method of claim 1, [[8, 11,]] 19, 26, 29, 37, 44, 47, 55, 56, 63 or 66 wherein the method comprises administering a daily dose of the hydrogenated pyrido (4,3-b) indole to the mammal.

Claim 77 (original): A method of improving the quality of life of a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to improve the quality of life of the mammal.

Claims 78-94 (cancelled)

Claim 95 (original): A method of prolonging the lifespan of a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to prolong the lifespan of the mammal.

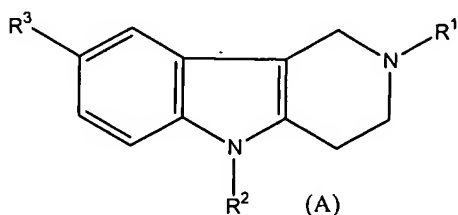
Claims 96-112 (cancelled)

Claim 113 (original): A method of extending the lifespan of a cell in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to extending the lifespan of a cell in the mammal.

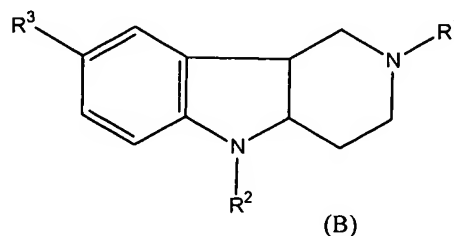
Claim 114 (original): The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.

Claim 115 (original): The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.

Claim 116 (original): The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



OR



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

Claim 117 (original): The method of claim 116, wherein aralkyl is  $\text{PhCH}_2$ - and substituted heteroaralkyl is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -.

Claim 118 (original): The method of claim 116, wherein

$R^1$  is selected from  $\text{CH}_3$ -,  $\text{CH}_3\text{CH}_2$ -, or  $\text{PhCH}_2$ -

$R^2$  is selected from H-,  $\text{PhCH}_2$ -, or 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -

$R^3$  is selected from H-,  $\text{CH}_3$ - or Br-.

Claim 119 (original): The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis( $\pm$ ) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 120 (original): The method of claim 119, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

Claim 121 (cancelled).

Claim 122 (original): The method of claim 121, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

Claim 123 (original): The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

Claim 124 (original): The method of claim 118, wherein  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is H and  $R^3$  is  $\text{CH}_3$ -.

Claim 125 (original): The method of claim 118 wherein  $R^1$   $\text{CH}_3\text{CH}_2$ - or  $\text{PhCH}_2$ -,  $R^2$  is H-, and  $R^3$  is  $\text{CH}_3$ -.

Claim 126 (original): The method of claim 118, wherein  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is  $\text{PhCH}_2$ -, and  $R^3$  is  $\text{CH}_3$ -.

Claim 127 (original): The method of claim 118, wherein  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -, and  $R^3$  is H-.

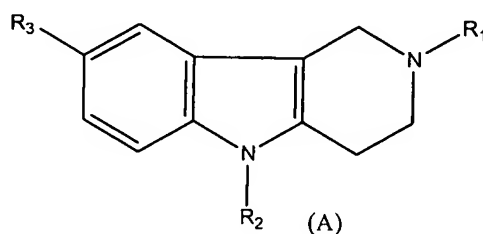
Claim 128 (original): The method of claim 118, where  $R^2$  is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -.

Claim 129 (original): The method of claim 118, wherein  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is H-, and  $R^3$  is H- or  $\text{CH}_3$ -.

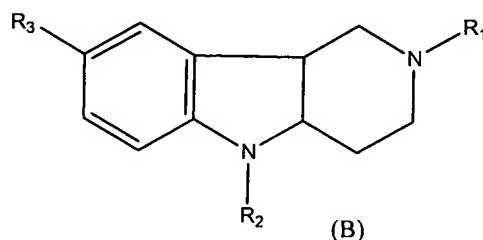
Claim 129 (original): The method of claim 118, wherein  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is H-, and  $R^3$  is H- or  $\text{CH}_3$ -.

Claim 130 (original): The method of claim 118, where  $R^1$  is  $\text{CH}_3$ -,  $R^2$  is H-, and  $R^3$  is Br-.

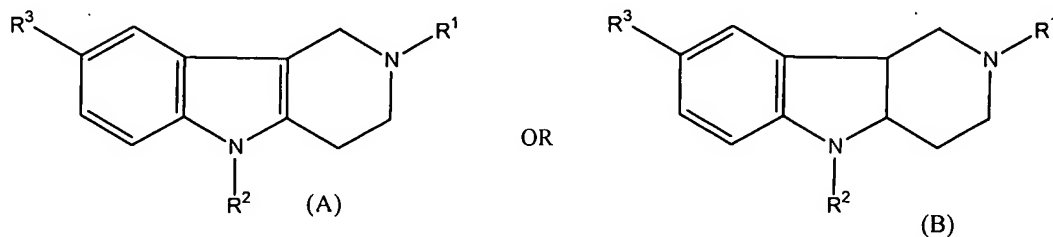
Claim 131 (currently amended): The method of claim [[2,]] 22, 40, 59, [[80, 98]] or 116 wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



Claim 132 (currently amended): The method of claim [[2,]] 22, 40, 59, [[80, 98]] or 116 wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



Claim 133 (new): A sustained release formulation comprising a compound of the formula:



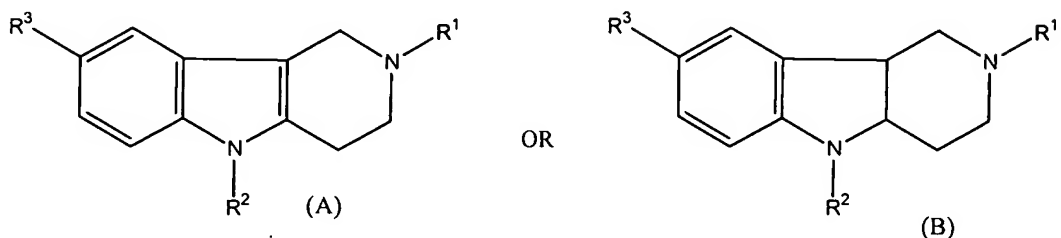
wherein:

$R^1$  is selected from  $\text{CH}_3$ -,  $\text{CH}_3\text{CH}_2$ -, or  $\text{PhCH}_2$ -

$R^2$  is selected from H-,  $\text{PhCH}_2$ -, or 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -

$R^3$  is selected from H-,  $\text{CH}_3$ - or Br-,  
or a pharmaceutically acceptable salt thereof.

Claim 134 (new): A sustained release device comprising a compound of the formula:



wherein:

$R^1$  is selected from  $\text{CH}_3$ -,  $\text{CH}_3\text{CH}_2$ -, or  $\text{PhCH}_2$ -

$R^2$  is selected from H-,  $\text{PhCH}_2$ -, or 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -

$R^3$  is selected from H-,  $\text{CH}_3$ - or Br-,

or a pharmaceutically acceptable salt thereof.

Claim 135 (new): The sustained release formulation of claim 133, wherein the compound is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole or a pharmaceutically acceptable salt thereof.

Claim 136 (new): The sustained release device of claim 134, wherein the compound is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole or a pharmaceutically acceptable salt thereof.

Claim 137 (new): A kit comprising 2,8-dimethyl-5-(2-(6-methyl-3pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole or a pharmaceutically acceptable salt thereof and instructions for use.